



Frisch's Outreach: Animals in Winter (Pre-K,K) Extensions

At a glance

Throughout this lesson, students will explore how varying animals cope during the season of winter.

Goal

This lesson is designed to familiarize students with the season of winter and how different animals survive during it.

Objectives

1. Students will be able to identify and describe winter as a season.
2. Students will understand the three animal survival strategies used during winter: Migration, Hibernation, and Endurance.
3. Students will develop a respect and appreciation for animals.

Theme

Animals use varying tactics such as migration, hibernation, and endurance to survive the cold winter months.

Sub-themes

1. Winter is a very cold time of year that can make it hard for animals to survive.
2. Some animals will migrate, or travel long distances to a warmer location, to escape the cold of winter.
3. Some animals will stay where they are and hibernate, or "sleep", through these hard times.
4. Some animals will stay where they are and endure the cold by using their various adaptations, like warm fur or feathers, to help them during the cold months.

Academic standards

Ohio Science Academic Content Standards	<i>Early Childhood Standards (ages 4-5)</i> Scientific Inquiry: 1, 2, 5 Scientific Ways of Knowing: 1, 3 <i>Kindergarten Standards</i> Scientific Inquiry: 1, 2 Scientific Ways of Knowing: 1, 2, 3
Kentucky Core Content—Science	<i>Grades Primary-4</i> The Characteristics of an Organism: SC-E-1.1.2,

Background

As winter time approaches, certain changes need to occur in order for animals to survive the changes in their environment. There are three main ways that may enable many animals to cope with the changes.

Some animals may migrate from one area to another. During the winter some animals will move to a new area to be where the environment is not as harsh and to seek out a place where food remains plentiful.

Other animals, if food remains available, will stay in their habitat. To help them cope with the harsher conditions, they have specialized adaptations; such as thicker fur or insulating feathers.

The third major way for animals to deal with the cyclic weather changes is for the animal to enter into a hibernation state. They will pass the time in a dormant or semi-dormant state. The endotherms will usually eat a lot and gain a thick layer of fat to act as energy reserves during the winter while they are sleeping. The ectotherms on the other hand don't gain a layer of fat. Instead their metabolic rate is reduced to the point where they appear almost dead. Some have even been known to be frozen during the winter and then in the spring they thaw out unharmed.

Vocabulary

Endure (v.)—to continue in the same state

Hibernate (v.)—to pass the winter in a resting state

Migrate (v.)—to pass from one climate to another for the purpose of feeding or breeding

Winter (n.)—the colder part of the year; the season between autumn and spring

Assessment

The classroom teacher can assess the students' progress by observing the students during the program and by performing one of the extensions.

Unsatisfactory—student seems uninterested, does not participate willingly, and does not answer questions correctly or at all.

Satisfactory—student seems somewhat interested, participates to some degree, and attempts to answer questions when asked.

Excellent—student seems very interested, participates willingly in all activities, and answers questions correctly.

Pre/post visit activities:

- Take a hike with the students and look for signs of winter. Can students find nuts and berries that the animals will eat? Emphasize that all the animal food should remain where it is found because the animals must find it there.
- Create a large mural that depicts how animals survive during the winter. Show animals migrating, hibernating, and enduring.
- Maintain a bird feeder near your school windows. Observe how many different species enjoy the food that you provide for them. Make a graph and record the different species that visit each day. Can you record for a

week? Explore what you have recorded.

- Create a class picture book. Can you tell how the animals near your school spend the winter?
- Write or tell about postcards from a migrating bird. Send a postcard from every stop along its migration route! Send one from its final stop. What will the bird have to say about its new winter home?

Resources

Books:

Bowden, Marcia. Nature for the Very Young: a Handbook for Indoor and Outdoor Activities. John Wiley & Sons, Inc. 1989.

Wilson, Ruth. Fostering a Sense of Wonder During the Early Childhood Years. Greyden Press. 1993.

Websites:

ALA's Great Websites for Kids:

Animals

<http://www.ala.org/gwstemplate.cfm?section=greatwebsites&template=/cfapps/gws/displaysection.cfm&sec=1>

Awesome Library – Kids

<http://www.awesomelibrary.org/Classroom/Science/Animals/Animals.html>

Awesome Library – Teachers

<http://www.awesomelibrary.org/Classroom/Science/Animals/Animals.html>

Cincinnati Zoo & Botanical Garden

www.cincinnati-zoo.org

Internet Public Library/Kidspace/
Animals (comprehensive listing)
<http://www.ipl.org/kidspace/browse/mas4500>

Lyrics for “Winter is Coming!” Sung to the tune of “London Bridges”

“Winter Is Coming”

Winter is coming (or is here) so bundle up, bundle up, bundle up.

Winter is coming (or is here) so bundle up.

Winter is coming soon (or is here)!

The squirrels in the trees gather lots of nuts, lots of nuts, lots of nuts.

The squirrels in the trees gather lots of nuts. Winter is coming soon (or is here)!

Some of the birds will fly away, fly away, fly away.

Some of the birds will fly away. Winter is coming soon (or is here)!

The frogs and the turtles dig down in the mud, dig down in the mud, dig down in the mud.

The frogs and the turtles dig down in the mud. Winter is coming soon (or is here)!

