

# Plant and Animal Changes

## Summary

Students will learn about animal adaptation, hibernation, and migration.

## Materials

### Instructional Procedures

- *What Do Animals Do In Winter?*

Glue

Two soup cans

A piece of cotton batting

Two thermometers

Classroom clock

- [How Does Fur Help Animals?](#) (pdf)

### Apple Tree Community

- [AppleTree Community Book](#) (pdf)

- [Apple tree animals](#) (pdf)

Crayons

Scissors

Glue

Stapler

Construction paper

### Additonal Resources

#### Books

- *Winter Lullaby*

, by Barbara Seuling; ISBN 0-15-201403-9

- *Animal Migration*

, by Janet McDonnell; ISBN 1-56766-402-4

## Background for Teachers

Many changes occur among plants and animals during the seasons. Some animals hibernate for the winter, some migrate, and some stay active.

## Intended Learning Outcomes

5. Understand and use basic concepts and skills.
6. Communicate clearly in oral, artistic, written, and nonverbal form.

## Instructional Procedures

### Invitation to Learn

Ask students what they do when it gets really cold outside. Tell students that animals and plants must prepare for winter also, but in different ways than we do.

### Instructional Procedures

Read *What Do Animals Do In Winter?* by Melvin and Gilda Berger. Discuss that during the winter, some animals travel or migrate, some hibernate, some hide, some change color, and some make changes to their bodies like growing extra fur.

Discuss migration. Some animals migrate to find food or water. Others migrate because they are looking for safe places to raise a family. Other animals migrate to escape the cold. List the

animals that migrate (birds, monarch butterflies, reindeer, whales, etc.).

Discuss hibernation. Animals hibernate when food is hard to find. Some animals are deep sleepers, and some animals are light sleepers. Dormice, ground squirrels, and groundhogs are three deep sleepers. They don't wake up at all. In fact, they look dead when they are hibernating! Turtles and frogs bury themselves in mud to hibernate.

Some animals make adaptations to survive during the winter. They can't put coats on like we do. For example, a fox grows extra fur. The following experiment will show how fur helps animals to stay warm.

How does fur help animals?

a. Glue the cotton batting around one of the soup cans. The cotton batting will represent fur.

Wait for the glue to dry.

b. Fill both cans with hot water. The can with cotton batting represents fur.

c. Place a thermometer in both cans and record the temperature of the water on the *How Does Fur Help Animals?* recording sheet. Record the temperature in the cans every 10 minutes for 30 minutes. What did you discover?

### Apple Tree Community

Prior to the lesson, copy an *Apple Tree Community* book for each child on heavy paper or cardstock. Fold and staple the books.

Explain to the students that plants change with the seasons as well as animals.

Read the black line of the *Apple Tree Community* to the students. Discuss ways that the apple tree helps the animals, and the animals help the apple tree. Tell the students that they will get to make their own book.

Pass out the *Apple Tree Community* book to each student. Read and discuss page one and two together as a class.

On page three of the book, have the students color the bare tree trunk. Then have them decorate the tree with small, ripped pieces of pink paper or tissue paper. Next, have them color, cut out, and glue the *apple tree animals* for page three onto the tree. You will need to leave the book open until these pages dry.

Read page four together as class. Then on page five, have the students color the trunk, and decorate the tree with ripped pieces of green paper or green tissue paper. Finally, have the students color, cut out, and glue the *apple tree animals* for page 5 on the appropriate parts of the tree indicated by the words of the story. Page four and five will need to be left open until the glue dries.

Read page six together as a class. Then have the students color the trunk and decorate the tree with ripped pieces of green and yellow paper for the leaves. The apples are ripe at this time. Have the students use red pompoms or red circles to show the ripe apples. Then have the students color, cut out, and glue the apple tree animals on the appropriate places of the tree. Again, wait for these pages to dry before moving on.

Read page eight together as a class. On page nine, have the students color the trunk, and glue a few ripped pieces of yellow and orange paper on the tree to represent the leaves. Also tell them that they will want to put a lot of leaves on the ground. Have the students put a few apples on the tree and also some on the ground. Cut out the squirrels on the apple tree animals page for page nine. Have them glue the squirrels onto the page. Wait for the glue to dry, and then have the students read and share their books.

### Extensions

Continue to discuss animal adaptations.

Have the students write animal reports.

## Assessment Plan

Ask the students what animals do when winter comes.

Have the students name three animals that depend on the apple tree for survival, and name how the animals depend on the apple tree.

## Bibliography

### Research Basis

Jiyoon, Y., & Onchwari, J. A. (2006) Teaching Young Children Science: Three Key Points. *Early Childhood Education Journal*, Volume 33.6, pp. 419-423.

Science education should be described as "doing" instead of just memorization of facts. For science to be successfully taught, knowledge of child development, individual differences, and sociocultural context, must be intertwined to develop a developmentally appropriate learning experience. Using the instructional model of the five "Es" (engaging, exploring, explaining, elaborating, and evaluating) will result higher level thinking skills and increased performance.

### Authors

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