

Animal Adaptation

Second Grade Science Standard: Students will gain an understanding of Life Science through the study of changes in organisms over time and cell theory.

Essential Questions: How does location affect living things?

Instructional time:

Academic Vocabulary:

冬眠, 迁移, 变化,

Interconnections Lesson:

Animal Adaptations:
Hibernate and Migrate

Materials:

- *Animals in Winter* books
printed
- crayons
- glue

Language References and Word Wall:

冬天, 变化, 动物, 雪, 冬眠, 迁移, 躲藏, 长毛

Sentence Frames:

冬天的时候_____ (动物) 的 _____ 会长长。
冬天的时候_____ (动物) 会迁移。
冬天的时候_____ (动物) 会冬眠。

Content Objectives

Oral Objectives

Reading Objectives

Writing Objectives

Obj. 2: Identify basic needs of living things and their abilities to meet their needs. Indicator: Identify behaviors and reactions of living things in response to changes in the environment including seasonal changes in temperature and precipitation.

Recognize the academic vocabulary while listening & demonstration comprehension by acting out the appropriate animal adaptation.

recognize the academic vocabulary

Lesson:

Opening (Warm Up/Review): (5minutes)

Question: What do you like to do in the winter? (ex. Build snowmen, go sledding, drink hot chocolate...)

Why do we only build snowmen in winter?

Why don't we play in the snow in the summer? (there is no snow in the summer)

Tell students:

People change their behavior in the winter because of the colder weather. We dress differently and do different activities.

Animals also change their behaviors in winter to help them survive. Today we are going to talk about how they do this.

Read: *What do animals do in the in Winter?*

Introduction to New Material: (15 minutes) Small Group/Center Instruction

- Have the class cut out the pictures in animal chart from *Animals in Winter* . **Do not color them until later.**
- Read the first page of the *Animals in Winter* book together.
- Display example and have students glue the pictures on the first page to match the example.
- **Read** the information on the page, show the **word card**, and **tell** about examples while showing pictures or objects.
- Have students **act out** the concept to help them understand.
- Repeat steps above with each page in the *Animals in Winter* book.
- As you read each page, teach the students about that particular type of animal's winter behavior and have them glue the animals in the correct places as you go. See information page for ideas how to teach each concept.

Closing: (minutes)

Tell the students we will color and practice reading the books to a partner tomorrow.

Assessment:

Check *Animals in Winter* book

Have students act out the winter activity of random animals (select an animal card from a pile) the student would have to decide if it migrates (flap your arms like flying), hibernates (curl up and pretend to sleep), stays hidden (hide under a desk) or grows/changes fur (pretend to put on a coat).

Day 2:

Independent Interactive Practice: (8 minutes)

(This can be in a center or whole group)

Have the students color the animals & read their *Animals in Winter* book with a partner.

Use the modeling cycle:

Teacher Does with Student:

With one of the students at your center demonstrate taking turns reading the book.

Two Students Do:

Pair up two students and have them demonstrate taking turns reading their books.

All Students Practice:

Pair up all the students in the center and have them read with their partner.

Information Page

Read with Students:

Cover:

Have students write their name on the cover. They will color it on day 2.

Page 1: Migration

Read: Some animals migrate in the winter. This means that they leave their homes in the fall and don't come back home until spring. Some animals migrate to find food or water, others migrate to find a safe place to raise their family, and others migrate to escape the cold.

- Geese fly south where it is warmer.
- Other birds fly south too.
- Many whales migrate to warmer waters

Word Card: “迁移” with pictures from the book *Animals in Winter* on the card

Tell & Show: Ask the children if any of them have grandparents who like to go to St. George in the winter because it's warmer there. Some animals also like to move to a warmer place in the winter. This is called “migration”. Have the children pretend to be a goose. Start in the northern side of the classroom and have them follow you “flying” to the southern side of the classroom. Use the term “migration” or “migrate” in many contexts such as “We are going to migrate south. Everyone fly with me as we migrate like birds. Look at all of those geese migrating south. Oh, I'm so tired after migrating, but it's so warm here after migrating. Repeat the process by pretending to another bird and a whale.

Page 2: Hibernation

Read: Some animals hibernate in the winter. This means they sleep all winter. These animals usually eat a lot of food before winter, so they can survive as they sleep. These animals don't eat all winter long!

- Bats hibernate in caves.
- Snakes hibernate in a cave or hole underground.
- Frogs hibernate buried in mud at the bottom of a pond or stream.
- Some turtles hibernate by digging into the warm muddy bottom of a pond.
- A bear hibernates in its den.

Word Card: “冬眠” with the pictures from the book.

Tell & Show: Ask by raise of hands how many like to crawl in their bed to be warm when it's cold out and go to sleep? Many animals sleep all winter long. Show pictures of a cave, a den, and the muddy bottom of a pond or stream.

Act out: Have the children pretend to be a bat flying around and then finding a place in a cave to go to sleep. Remind them we can't hang upside down so we'll just have to pretend. Ask the children to pretend to be a snake & crawl into a hole underground and be very still and sleep. Have the children hop like a frog & then bury into the mud at the bottom of a pond or stream to sleep. Let the children pretend to be a turtle and then dig a hole in the muddy bottom of a pond to sleep. Finally ask the children to act like a bear, crawl inside a den, and sleep.

Page 3: Stay Hidden

Read: Some animals stay active during the winter, but many of them hide in their homes during winter. They stay inside where they are safe and warm and eat the food they have stored.

- Honey bees hide in their hives and eat their honey.
- Ants hide underground and eat the food they have stored.
- Squirrels stay hidden in their trees and eat the nuts they have stored.
- Moles hide deep underground and eat worms and insects.

Word Card: “躲藏” with pictures

Tell & Show: Tell them how many of us stay inside when it's cold. Some animals stay hidden in warm houses to get out of the cold and eat their food stored there. Show some nuts when talking about squirrels in a tree. Show pictures of a beehive, a squirrel's home in a tree, and a mole's underground tunnel.

Act out: Pretend to be honey bees in a hive eating their honey. Pretend to be little ants underground eating food stored. Pretend to be a squirrel hidden in a tree and eat the nuts you have stored. Pretend to be the mole hiding underground and eat worms & insects.

Page 4: Grow or Change Fur

Read: Many animals that stay active in winter grow an extra coat of fur to keep them warm. Some animals grow a coat of white fur to help them hide in the snow.

- Dogs grow extra fur to keep them warm.
- Sheep grow extra wool to keep them warm.
- Snowshoe rabbits grow coats of white fur.

Word Card: Show “长毛” word card with pictures.

Tell & Show: Tell how we put on thicker coats to keep warm in the winter too. (Show coat)

Act out: Have the children act out with your pretending to grow thicker fur as it gets cold. Use the phrase “grow or change fur” in multiple contexts as you do. For example: Dogs grow fur. Let's be a dog and pretend we're growing a thicker fur to keep warm. Now let's be a sheep and grow wool. A horse grows thicker fur.

迁移

鹅飞到温暖的地方。

其它鸟类飞到温暖的地方。

鲸鱼迁移到温暖的地方。

冬眠

蝙蝠在山洞里冬眠。

有一些乌龟在池塘的泥浆里冬眠。

蛇在山洞里和地洞里冬眠。

熊在的洞穴里冬眠。

青蛙在池塘的泥浆里冬眠。

躲藏

蜜蜂躲藏蜂窝里吃储藏的蜂蜜。

松鼠躲藏树上吃储藏的坚果。

蚂蚁躲藏地里吃储藏的食物。

鼯鼠躲藏地里吃储藏的虫子和昆虫。

长毛或变毛

狗长出更多的毛来保暖。

羊长出更多的毛来保暖。

雪兔长出白色的毛来保暖。