

LESSON: Life's Different Seasons

INSTRUCTOR: Lori Doutre

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DISTRICT: Weber County

GRADE LEVEL: 2

CORE CURRICULUM

Science Standard 4: Life Science.

Objective 2: Identify basic needs of living things and their abilities to meet them.

Intended Learning Outcomes:

1. Communicate and justify how the physical characteristics of living things help them meet their basic needs.
2. Identify behaviors and reactions of living things in response to changes in the environment including seasonal changes in temperature and precipitation.

Lesson Objective: The students will be able to recognize changes in bears and insects, comparing how these animals are different from and similar to themselves.

INTRODUCTION

Background Information:

There are six main animal kingdoms: insects, birds, fish, mammals, amphibians and reptiles. All animals live in a habitat that is suited to fit their needs. Animals also have adaptations that allow them to survive in their habitat.

Research Basis:

Gallenstein, N. (2005). Engaging young children in science and mathematics. *Journal of Elementary Science Education*, Volume 17.

A key element for children in understanding science and mathematics knowledge during early childhood is through active, creative, and intellectual engagement. According to Jerome Bruner, instruction should include a variety of developmentally appropriate techniques. These techniques include the representation of knowledge through actions, drawing and words. The process skills of observing, communicating and inferring are also crucial to the understanding and problem solving in science and mathematics. In addition, basic mathematics concepts such as comparing, sorting, counting, and graphing are crucial to the understanding and organization of data in science.

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INVITATION TO LEARN

1. Invite students to pick an animal that they love from a variety of pictures and books provided by the teacher.
2. On a piece of white paper, invite the students to draw that animal along with three or four facts about that animal.
3. Using the papers provided by the students sort them as instructed by the class.
4. Ask: "Could we sort the animals according to where they live? How is that the same or different from where we as a human race live?"

INSTRUCTIONAL PROCEDURES

Who Am I?:

1. Send home a note asking for students to bring a picture of themselves when they were one year old or younger.
2. As photos are brought in, make two black-and-white copies of them and send the originals home.
3. Glue one of the black-and-white copies of the photos to a poster entitled "Who Am I?"
4. When you have all of the students' photographs of when they were little (or a student's drawing of a self-portrait) copied and glued on the poster, bring the class together where they can all see.
5. Have the students then take turns guessing which picture is theirs. Remind them not to share information, or show their pictures to their friends.
6. Read *When I Was Little*. Discuss the changes a person goes through-how they were when they were a baby, three years old, five years old, and now.
7. Discuss how students' needs have changed, and what they are able to do now verses when they were little. Write ideas on a poster.

Top-Notch Reporters:

1. Have the students become reporters. As a class of reporters, list on the board questions they would like to know about how they were as a baby, a three-year-old, a five-year-old, and now. Record their questions on poster.
2. Using the questions generated as a class, create and type a letter to send home.
3. As the letters are returned, have the students "report" what they discovered. Invite them to think of things they remembered doing at the different ages that may have been skipped from their questionnaire sheet.
4. Using the questionnaire and information remembered by students, instruct students to

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pre-write facts they would like to write in a booklet entitled "Changes in Me." Facts could include things they did as a baby, a three-year-old, a five-year-old, and now. Facts could be listed in a class journal or lined paper to be turned in.

5. As a class, as partners, or individually with the teacher, students edit their writing, making any changes needed.
6. Instruct the students complete their "Changes in Me" booklet. Instruct the students to write each final draft of their stages of life on its own page.
7. Pass out the second black-and-white copy of their baby pictures. Instruct students to glue their picture anywhere on the cover of their "Changes in Me" booklet.
8. Have them share their booklets as partners or with the entire class.

Three Crazy Bears:

1. Read *Alaska's Three Bears*. Discuss the differences in the Grizzly Bear, Brown Bear, or Polar Bear, and how their unique features allow them to adapt to their environment.
 2. Pass each student a copy of the "My Bear Facts" paper.
 3. Divide students into six groups, two groups for each bear.
 4. Provide two groups with nonfiction books or facts about each type of bear: the grizzly bear, the brown bear, or the polar bear.
 5. Instruct students as a group to research their assigned bear using their "My Bear Facts" paper.
 6. Instruct each group to create a poster listing the facts found on their "My Bear Facts" paper (one poster per group). Encourage the groups to follow the format found on their "My Bear Facts" paper.
- Allow each group time to share their findings and posters with the class.

Buggy features:

1. Read "Have You Seen Bugs?" to the class.
2. Provide a variety of bugs (pictures or plastic) and invite students to choose their favorite one.
3. Ask: "How can the color of the bug help the bug in their environment? Would a bright yellow beetle live in red sands of the desert? Why or why not?"
4. Have the students sort their bugs by color.
5. Ask: "How is the bugs' color important to help them camouflage themselves in their environment? Can you tell what your bug may eat from the mouth he has? Looking at your insect, what could other features tell you about the way your bug lives?"

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Bug Fact Research:

1. Provide each student a copy of "Bug Facts Research" paper.
2. Divide your class into five groups.
3. Assign or allow each group to choose one of the following types of bugs to research: beetles, moths, butterflies, bees, or praying mantis.
4. Provide each group with several nonfiction books or facts about their type of bug.
5. Instruct each group to research their bugs, providing answers for each area listed on their "Bug Facts Research" paper.
6. Provide each group with a poster. Instruct each group to draw their insect at the top of their poster. Under the drawings of their insect on the poster, tell each group to write 4-6 new facts the group learned about their bug.
7. Allow them time to share their posters with the class.

Create a Creature:

1. Introduce the idea of each student creating his/her own creature.
2. Compile a list of what the students have learned about how animals and insects respond to changes in their environment. List the student's discoveries on the board.
3. Provide each student a copy of "My Creatures Features" paper. Explain the "My Creatures Features" paper to the students and instruct them to complete it.
4. As a homework assignment or during class time, instruct them to create their creature (bug or animal). Provide students with art supplies to create the habitat and needs of their creatures.
5. Allow students to share their creatures and information with the class.

LESSON MATERIALS

- *Alaska's Three Bears*
- *Have You Seen bugs?*
- *When I Was Little*
- Plastic insects
- Student baby pictures
- Nonfiction books about bears
- Large sheets of paper
- "Changes in Me" booklet
- Art materials such as clay, paper, paints, pipe cleaners, googly eyes, or scrap paper

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ASSESSMENT SUGGESTIONS

Lay out some animals and individually have students explain to you how the animals should be sorted. Have the students explain their reasoning behind their sorts to check for understanding.

POSSIBLE EXTENTIONS/ADAPTATIONS/INTEGRATION

1. Repeat the Bug Fact Research activity with frogs, plants, or reptiles.
2. Have students chose their favorite type of animal or insect species. Allow students time to create a chart using books on their species to show what their species does during the four seasons, where their species lives, and what their species' diet is.
3. Have the students create a camouflaged bug to hide around the room. Students pick an area in the room for their bug to hide. The students then color their created bug to be camouflaged to hide in that area. Invite students from other classes to come in and try to find the bugs hidden around the room.

RESOURCES: BOOKS, MEDIA, ARTICLES, WEB SITES, AND ORGANIZATIONS

BOOKS

When I Was Little, by Jamie lee Curtis, ISBN:0-590-03239-9

Have You Seen Bugs?, by Joanne Oppenheim, ISBN: 0-590-05965-3

Alaska's Three Bears, by Shelly Gill, ISBN:0-9434007-11-X

MEDIA

ARTICLES

WEB SITES

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Have the students create a bug or animals at home. It must be a made-up creature. Have students discuss with you when they return their creature it to school how it is adapted to live in your environment.

LESSON AND ACTIVITY [TIME SCHEDULE]

- Each lesson is 55 minutes.
- Each activity is 30 minutes.
- Total lesson and activity time is 85 minutes.

ACTIVITY CONNECTED TO LESSON**Activity One:**

1. Following the "Who Am I?" activity, divide participants into five groups, instructing them to:
 - a. Make a list of the changes that a teacher goes through-how they were when they were in elementary school, high school, in college, and now as a teacher.
 - b. Discuss how their needs change.
 - c. Divide the poster into four sections, labeled: "Needs in elementary school," "Needs in high school," "Needs in College," and "Needs now as a teacher."
 - d. Write ideas on a poster for each section.
 - e. Using information from their posters, have them create a "Changes in Me" booklet.

Share the group posters as a whole group if there is time.

Activity Two:

1. Following "Bug Fact Research" activity, divide the class into six groups. Assign each group one bear (grizzly, brown, or polar bear) and one type of insect (beetles, moths, or bees).
2. Provide each group with non-fiction books about their groups creatures and a Post-it poster.
3. Instruct each group to complete their poster as follows:
 - a. Divide the top two-thirds of the poster into four sections.
 - b. Label each section with one of the season.

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- c. Instruct the participants to fill in the bottom third of the poster with the size, weight, and diet of the species they have been assigned. Have them answer the following two questions: Does their species' diet change with the season? If yes, what does it eat and when?

Activity Three:

1. Using the play-dough and cereal box brought by the participants, instruct them to create a creature and its habitat.
2. Instruct participants to complete their "My Creature's Features" paper to explain their creature to the class.

ACTIVITY MATERIALS

- Large Post-it note posters
- Bear and bug nonfiction books
- Play-dough
- Blank 8 1/2" x 11" white papers
- Copies of: My Creature's Features," "My Bear Facts," and "Bug Facts Research" black lines from the lessons
- Copy of "Changes in Me" booklet (one cover and four lined papers per booklet)
- Scraps of art paper

Black Lines
My _____ Bear Facts By _____

Winter	Spring
Summer	Fall

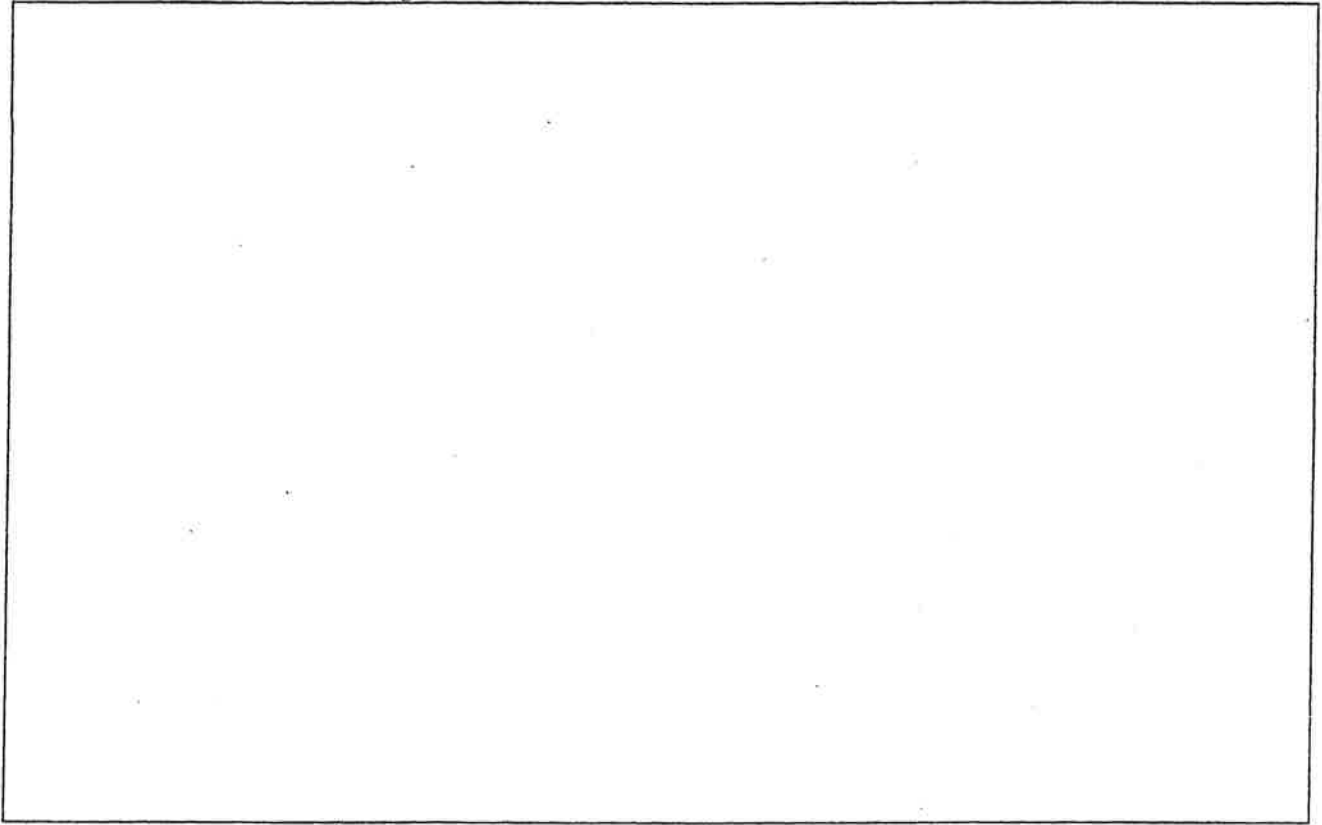
The size of the bear:

The weight of the bear:

The diet of the bear:

Does its diet change with the season? If yes, what does it eat and when?

My Creature's Features



The size and weight of my creature: _____

The diet and defenses of my creature: _____

The climate and habitat where my creature lives: _____

My creature's favorite season and why: _____

Bug Fact Research By _____

<p>The size of my bug:</p> <p>The diet of my bug:</p> <p>The climate where my bug lives:</p>	<p>Season for my bug:</p>
<p>Fact #1</p>	<p>Fact #2</p>

Changes

In

Me

By _____

