

Unit 3: Fall Observations and Animals

Lesson #1: Fall Seasonal Observations

Book(s): Unit 1 – The Little School Bus (observations)

Time Frame: 20-30 minutes

Learning Standards:

Science

Earth and Space Science: Weather

- 1) Describe the weather changes from day to day and over the seasons.

Earth and Space Science: Periodic Phenomena

- 1) Identify some events around us that have repeating patterns, including the seasons of the year, day and night.

Life Science: Living Things and Their Environment

- 1) Recognize changes in appearance that animals and plants go through as the seasons change.

Skills of Inquiry

- Ask questions about objects, organisms, and events in the environment.
- Make predictions based on observed patterns.
- Record observations and data with pictures, numbers, or written statements.
- Discuss observations with others.

Student will be able to:

- 1) Make observations about a set area outside and predict how this area will change with the seasons.

Anticipatory Set: Tell the students the right now the season is called the fall. Ask them what happens in the fall. What season comes next? Write the four seasons on the board in a circle and draw arrows between the seasons showing that they go in a cycle.

Activity:

- 1) Organize the science groups (2 students) to go outside. Direct them to make observations using their five senses about a specific area near the school that is roped off. The adults should act as scribes and write down as many observations as possible. Remind the students to make observations about living things and non-living things like dirt, wind, and rocks. Bring a thermometer outside to record the temperature and discuss the weather conditions.
- 2) Then, students should sit in a circle and each student should make a drawing of the square in the space labeled fall.

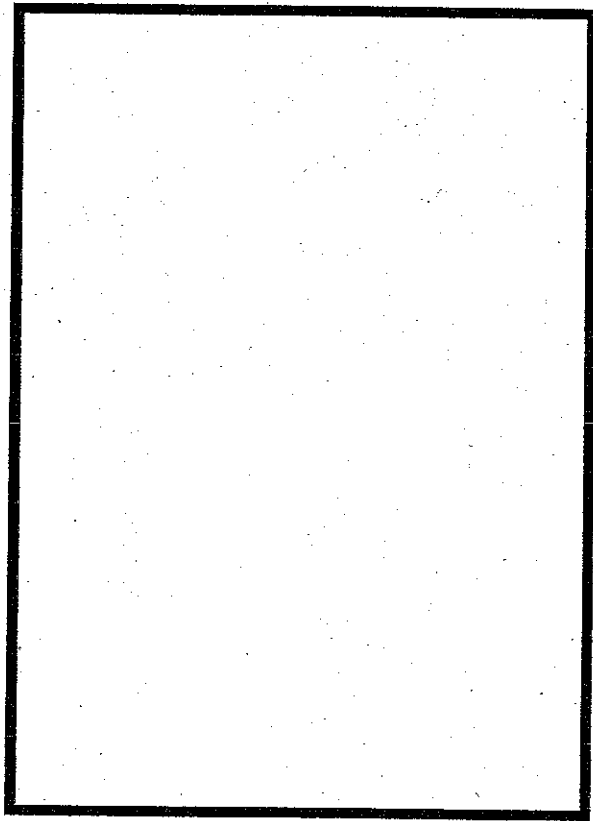
- 3) Return to the classroom and write all of the observations on a large piece of paper on the board (also labeled fall). Invite students to share their drawings with the class.

Closure: As a class, make predictions about how this area will be different in the winter. Write down the predictions on another piece of paper labeled winter predictions. Make predictions about the weather, temperature, living things, and non-living things. Note: Save all of the student drawings, observations and predictions to discuss during the next seasonal observation.

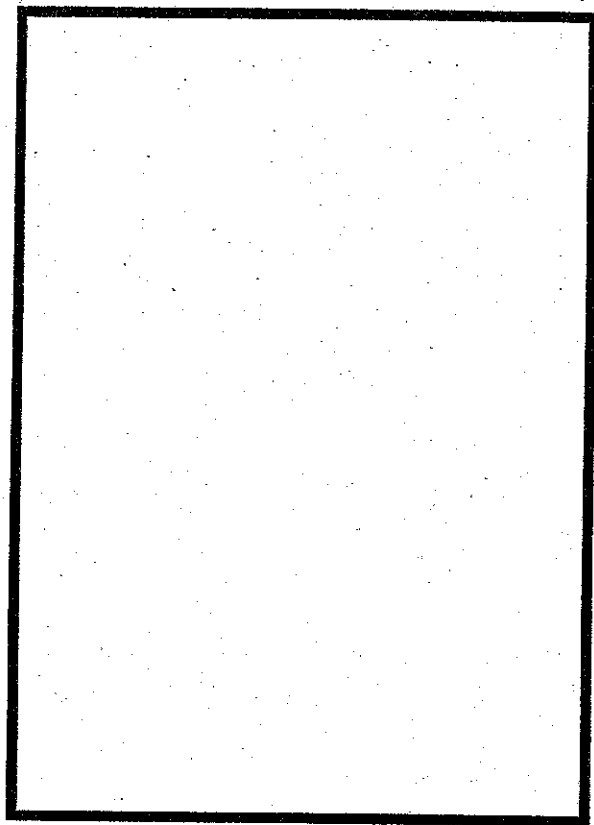
Assessment: Participation in class discussions and activities, drawings of fall

Resources and Materials: Large length of rope, student worksheet for the seasons, large pieces of paper

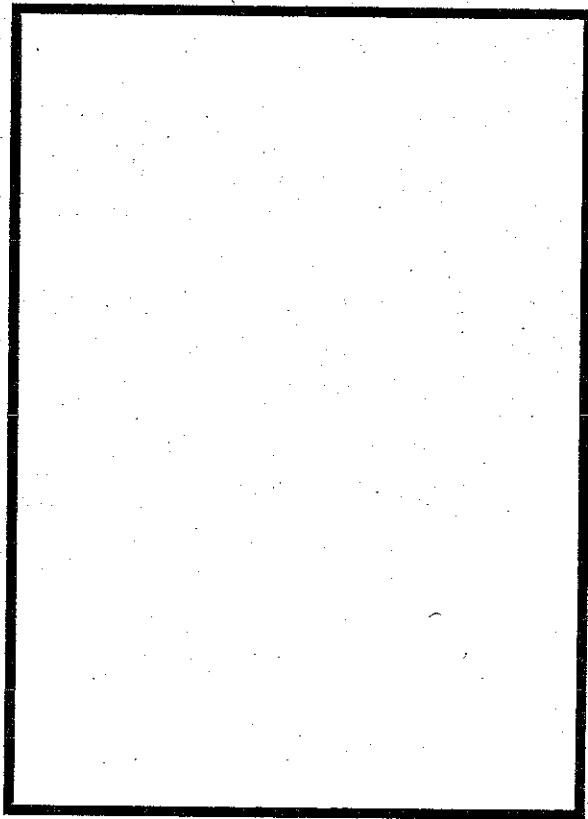
Fall



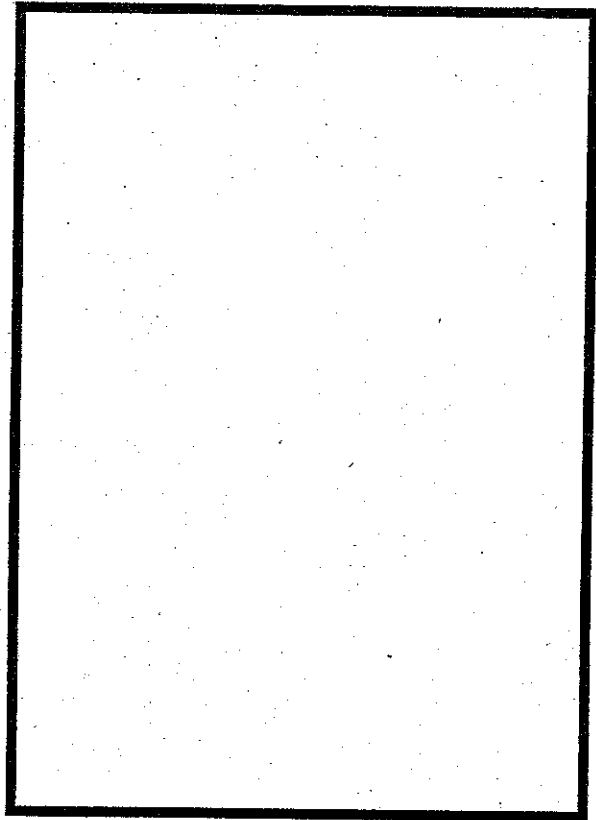
Winter



Spring



Summer



Name: _____

Fall Observations and Animals

Lesson #2: The Camouflage Game

Time Frame: 1 session of 30 minutes

Learning Standards:

Life Science: Recognize changes in appearance that animals and plants go through as the seasons change.

Identify the ways in which an organism's habitat provides for its basic needs.

Skills of Inquiry:

Ask questions about objects, organisms and events in the environment.

Make predictions based on observed patterns.

Discuss observations with others.

Student will be able to:

Discuss why animals use camouflage to protect themselves from predators.

Activity:

Gather children on floor and discuss camouflage – what it is and why animals need it to be protected from predators. Show examples from photographs in books. (The Eyewitness Butterfly Book is good for this.)

Then play the "Camouflage Game". Children stand in a circle around newspapers that have been laid on the floor. One child will be the predator and is taken out to hide his/her eyes. The other children spread out the butterflies (some cut out of colored construction paper and some cut out of newspaper) on the newspaper field. The one child is brought back and is timed in picking up the total number of butterflies. Each child gets a turn as predator and you can compare scores.

Closure:

At the end of the game ask the children if they think they would rather be a camouflaged butterfly, or not, and why.

Assessment: Participation in class discussion and activities

Resources and Materials: Construction paper, newspaper. Pre-cut all the butterflies. You will need ten in newspaper and ten in a solid color, they can be of various shapes and sizes, but all butterflies. Make a separate set for each class as they get a little rumped by the end of a class.

Fall Observations and Animals

Lesson #3: Migration and Canada Goose Facts

Time Frame: 1 session of 30 minutes

Learning Standards:

Life Science: Recognize changes in appearance that animals and plants go through as the seasons change.

Identify the ways in which an organism's habitat provides for its basic needs.

Skills of Inquiry:

Ask questions about objects, organisms and events in the environment.

Make predictions based on observed patterns.

Discuss observations with others.

Student will be able to:

Talk about migration and create a Canada Goose.

Activity:

Gather children together on the floor to discuss migration. What is migration and why do animals do it in the Fall – particularly why do birds migrate south. Their habitat is changing with advance of the seasons. Birds migrate to find more food and warmer climates. Canada Geese are perfect examples. You can play their call on the internet site BirdJam so the kids can hear them.

Canada Geese fly as far as 1000 km per day and they travel both day and night. You can hear the geese cackle as they fly. They do this to stay together. They fly in V formations because it is aerodynamically advantageous and they can all see the leader. The leaders are usually the oldest birds in the flock and they teach the younger ones the way. They use the stars, sun and landmarks to find their way.

After the discussion, have children move to tables. Have them cut out their own goose from the template, staple three sides together and stuff them with the excess

shreds of paper, then staple them closed. Then kids can color with markers. Give them an example that is relatively close to natural coloring for Canada Geese, but let them choose their colors.

Closure:

Remind students why birds migrate with the change of seasons.

Assessment: Participation in class discussion and activities

Resources and Materials: Markers, copied bird templates, scissors.

Unit 3: Fall Observations and Animals

Lesson #4: Hibernation

Book(s): Unit 2 –Bear Snores On, A Bed for Winter

Time Frame: 2 sessions of 20-30 minutes

Learning Standards:

Science

Life Science: Living Things and Their Environment

- 1) Identify the ways in which an organism's habitat provides for its basic needs (plants require air, water, nutrients, and light; animals require food, water, air, and shelter).
- 2) Recognize changes in appearance that animals and plants go through as the seasons change.

Life Science: Characteristics of Living Things

- 3) Recognize that animals (including humans) and plants are living things that grow, reproduce, and need food, air, and water.

Skills of Inquiry

- Ask questions about objects, organisms, and events in the environment.

Student will be able to:

- 1) Describe the habitat of a Massachusetts black bear.
- 2) Explain why bears hibernate and what happens during hibernation.

Anticipatory Set: Refer to the book *Bear Snores On*. Make sure that all of the classes have read the book before this activity. Ask the students why the bear is sleeping while all of the other animals are awake? Get as many ideas as possible from the students and use the book as a visual aid as necessary.

Activity:

- 1) Write the word **hibernation** on the board and introduce this word to the class. Explain that the scientific term for what a bear does when it appears to be sleeping all winter is called hibernation. Tell the students that black bears live around Williamstown and also hibernate. Ask them to come up with some ideas about why black bears hibernate (sleep) all winter long.
- 2) Give each table of students a few pictures of bears either eating food or in a den hibernating. Ask the students to discuss the pictures and describe what the bears are doing in each picture. Allow time to talk about the pictures as a class and give the students a chance to ask more questions.
- 3) Share some information with the class about black bears (relate to the pictures when relevant). Ask students where black bears might get water

in Williamstown. Explain that they get water from rivers, streams, ponds, and springs. Ask students where black bears might get food in Williamstown. They get food from a variety of sources including plants (fruits, nuts, and leaves) and animals (including insects and fish). Ask students where black bears might get shelter in Williamstown. Explain that black bears winter and get shelter in a den (an area with rocks, trees, often partly underground that is sheltered from the weather). This is a good breaking point for the first lesson.

- 4) The second lesson can begin here. Talk about hibernation again with the students. Ask the students when the types of food eaten by black bear are most available (spring, summer, and fall). Relate this to the seasonal observations that you have made as a class.
- 5) Explain that the bear is a large animal and needs a lot of food to stay active and when food is not as abundant (winter) the bear hibernates to save energy. Bears gain weight and store food as fat before hibernation and then do not move during hibernation. When spring arrives and food sources are present again then the bear comes out of hibernation. Also, discuss where a bear hibernates (den) so that it is safe and dry. This relates to the book as well.
- 6) Ask the students to make a drawing of a bear during the late summer (when it is eating and storing fat) and during the winter (when it is hibernating). Explain that the bear should be larger in the summer because it loses weight as it hibernates and emerges from hibernation quite hungry.
- 7) As time permits, ask students to share their diagrams with the class and to explain what the bear is doing in each picture.
- 8) Alternatively, provide students with berries to eat and construct a location under a table or desk (with paper) that the students can go hide under to simulate hibernation. Discuss as a class.

Closure: As a class, discuss the process of hibernation. What does the bear do all summer and fall to prepare for the hibernation? How does the bear survive without eating during the winter (when it is hibernating)? How does a bear know that winter is coming? How does a bear know that winter is over?

Assessment: Participation in class discussions and activities, drawings of bears

Resources and Materials: Bear pictures, paper, crayons, markers, colored pencils, berries, butcher paper, tape

Hibernation Song: (Sung to the tune of Wheels on the Bus)

The weather's getting cold so bundle up, bundle up, bundle up

The weather's getting cold so bundle up, winter's coming soon.

The bears in the cave sleep all the time.....

The squirrels in the trees get lots of nuts.....

The frogs and toads go deep in mud.....

The ducks and the geese go flying south.....

The people in the town wear hats and gloves.....