

FOREST CREATURES

Third Grade - Rahr Memorial School Forest

ENDURING UNDERSTANDING

Many animals are shaped or colored to blend into their surroundings, and these different designs of camouflage are critical to the survival of those animals. Mammals and birds have certain characteristics that are unique.

ASSESSMENT

Students will be able to demonstrate their understanding by listing the parts of a bird, explaining what a mammal is, identifying animals that use camouflage as a survival strategy, and searching for mammals in the forest.

WISCONSIN'S MODEL ACADEMIC STANDARDS

Math: A.4.1, A.4.2

Science: A.4.1, A.4.5, B.4.1, C.4.2, C.4.5, C.4.7, F.4.1

Environmental Education: A.4.1, A.4.2, A.4.3, B.4.1, B.4.4, B.4.6, E.4.2

CLASS OUTLINE

- I. Set-up
- II. Sample schedule
- III. Introduction
- IV. Birds, birds, birds
- V. Mammals
- VI. Predators and prey
- VII. Animal needs
- VIII. Conclusion
- IX. Clean-up

Safety

Optional/ Rainy Day Activities

Additional Information

Resources

School Forest map

MATERIALS

Birds, Birds, Birds

- bird photos
- bird search sheets
- bird i.d. books
- clipboards
- pencils
- crayons

Animal Needs

- Oh Deer! Poster
- wet-erase markers
- washcloth
- habitat scavenger hunt cards

Predators and prey

- bird i.d. books
- rubber worms
- bird order vs. worm color chart
- worm colors found chart
- wet-erase markers
- washcloth

Mammals

- fur coat
- funny eyes
- ear headband
- backbone prop
- baby doll
- milk carton
- small perfume bottles (2)
- rubber stretch band
- pair of gloves
- container of paper teeth
- rubber nose
- thermometer
- large hat
- picture of heart

CLASS PROCEDURES

I. Set-up

After setting up a date with the School Forest coordinator, teachers are also responsible for submitting a field trip request form. Teachers should schedule a time when the School Forest coordinator can meet with them at school to discuss the visit. Teachers will be asked to teach or co-teach one of the activities while the student groups rotate through the activities during the day. The School Forest coordinator can also teach at one of the stations during the day. Preparation time will be needed to review the activity.

All of the materials needed for these activities will be set-up at the School Forest. Teachers will need to bring a few things from school: first aid kits, emergency contact information, extra clothing, and any additional activities they feel necessary for the class. Students will need to bring a bag lunch (with a drink and nothing that needs a microwave) and adequate clothing for the day.

II. Sample Schedule:

9:00	Depart from School
9:30	Arrive at School Forest
9:30 – 9:50	Welcome and Introduction
9:50 – 10:45	rotation 1
10:50 – 11:45	rotation 2
11:45- 12:20	Lunch
12:20- 1:15	rotation 3
1:20 – 2:10	rotation 4
2:15 – 2:25	Conclusion
2:30	Depart from school forest
3:00	Arrive at school

III. Introduction

The animal kingdom is broken up into smaller groups of animals. For example, there are amphibians (frogs, toads, salamanders), reptiles (snakes, lizards), birds, mammals, fish, and insects, to name a few. Today we will be studying some of the different animal groups that live at the School Forest and other areas of Wisconsin.

Review the rules and expectations of the class for their visit.

IV. Birds, birds, birds

A. what is a bird

What are the characteristics of a bird? Ask students to list characteristics that make birds different from other animal groups. If they are having a tough time, refer to photos and posters. They can also use Bird Identification books to help find information.

(Beak or bill, warm blooded, feathers, egg laying, wings)

B. What do they need

Like humans, birds have needs for survival. They need food, water, shelter, and space. Explore these needs as a class. After the students understand the needs of animals, talk more about the need of food for survival. Why do we (humans) need food? Why do birds need food? All animals need calories to survive. Calories are the fuel that keeps us going. What types of food do birds eat? Birds eat seeds, buds, leaves, fruits, insects, worms, mollusks, fish, and small mammals.

Why do we feed the birds? The birds need food to survive. During the winter months, it is hard for birds to find food. Many birds migrate south where it is easier to find food and some birds stay here in Wisconsin. What else can humans do to help birds? Some answers may be plant vegetation for cover, understand them, and protect where they live or migrate through.

C. searching for feathered friends

Before you leave the buildings area, discuss the hike with the students. Everyone should remain quiet while hiking so as not to scare off the birds (pick up feet and whisper or do not talk). Take students on a hike through different parts of the School Forest. Traveling through different cover types and areas will allow for viewing of different species that live in those areas. Go to the beach, deciduous forest, hemlock forest, sand dunes, swamp, meadow, or pond, wherever you feel like going. When you see birds, watch what they are doing and take note of what they look like. Students can use their "Birds at the School Forest" record sheet to describe the bird and where it was found. They can name the bird on their own or use a bird guide; it is up to the teacher. You may not want to put much emphasis on knowing the name and more emphasis on observing the bird. While you are hiking, watch for bird signs too (like nest, seed shells, and tracks).

V. Mammals

A. what is a mammal- mammal dress-up

Divide the class into small groups and give each group paper, pencil, and a clipboard. Have each group spend a couple of minutes brainstorming a list of mammal characteristics.

Using the props, dress up a student with examples of mammal characteristics. Ask each group to read an item off their list and apply that adaptation to your mammal volunteer while explaining its importance to mammals.

1. Fur coat. Mammals are the only animals that have hair. It can be used to shed water, insulate the body, provide protection, and help with feeling the environment. (prop: fur coat)
2. Heart. Mammals have strong 4-chamber hearts that push blood quickly through the entire body, which gives mammals more energy to be more active than cold-blooded animals. (prop: heart picture)
3. Diaphragm. An active metabolism is supported by an efficient respiratory system that uses a diaphragm. (prop: elastic band)
4. Large brains. Mammals have larger brains than other vertebrates of equivalent size, and seem to be the most capable learners. Of all the animals, mammals have the most powerful central nervous system. (prop: hat)
5. Smell. Mammals use smell for finding food, family, and mates as well as avoiding danger. (prop: plastic nose)
6. Outer ears. The outer flap that form mammals' ears help to gather sounds waves and direct them to the inner ear. Other animals lack these outer ears. (prop: ear headband)
7. Eyesight. Eyesight of mammals range from very poor (moles) to excellent (humans and other primates). (prop: weird eyeglasses)
8. Touch. Skin is sensitive to heat, cold, and pain. (prop: gloves)

9. Teeth. Whereas the teeth of reptiles are generally conical and uniform in size, mammal teeth come in a variety of shapes and sizes. (prop: paper teeth... throw away after each student)
10. Warm-blooded. The body temperature of mammals always stays the same, which allows them to be active in hot or cold temperatures. (prop: thermometer)
11. Live birth. Most mammals give birth to live young. The only mammals that do not are the egg-laying members of the Order Monotremata, which include platypus and echidnas. (prop: baby doll)
12. Glands. Most mammal skin has many glands (including milk, oil, and scent glands). (prop: milk carton and small perfume bottles)
13. Backbone and braincase. Like other vertebrates, mammals have a bony backbone as well as a cranium, which is a hard case made of bone that surrounds the brain. (prop: backbone)

B. life as a mammal

Go out into the woods with your students. Follow any of the School Forest trails and find a secluded spot to explore life as a mammal. Now, the students will try to see what the world would look like as different mammals:

- mice – have student lay on their stomachs and look forward
- squirrels – students should slightly raise their heads
- rabbits – students should raise up to laying on their elbows
- fox – students should raise up to their knees and keep their elbows on the ground
- coyote – students should raise up to being on their hands and knees
- deer – students should stand up

C. mammal search

Explore with your class. Look for mammals and signs of mammals (dens, deer beds, scat (poop), bones, and tracks). Go to different areas, set the boundaries, tell the students the expectations and the “come back” signal, and then let the students explore the area. They should remember what they find and make guesses about what kind of animal it was to share with the class. Once you call the class back, have everyone share something that they found.

VI. Predator and prey

A. camouflage

Start this class by talking about camouflage with the students. What is it? Camouflage is any coloration, body shape, or behavior that helps an animal hide. Ask the students if they can list any animals that use camouflage. Think about the advantages that bullfrogs have because they are green and polar bears have because they are white. (See the additional information section of this lesson plan.)

Birds and Worms game

1. Before the class goes outside, the teacher (or a chaperone) should go out to the playing area and scatter the worms throughout the area.
2. Divide the group into two to four teams with the same number of students in each team. Take everyone to the playing area. Tell the students that various types of tasty animals are scattered here and that the

students are hungry birds. Describe to them what the worms look like. Ask them to predict what color worm might have the best camouflage for this environment.

3. Arrange the teams in relay race lines. Explain that the object of the race is to be the first team to get every bird fed. When you say, "Go," the first bird in each line should "fly" over the area and pick up the first worm he or she sees. Then the bird should fly immediately back to the line and tag the next bird, who then does the same thing. When the last bird returns, everyone should sit down. The first team to be seated wins.
4. Now use the wet-erase chart labeled "Bird Order vs. Worm Color." Ask each student to place their worm in the column of the spot they were in line (all of the first birds will put their worms in the first column and so on). Record which color worms were found in each round. Is there a pattern? Does the pattern have any significance?
5. Use the wet-erase chart labeled "Worm Colors Found." Ask each student to place their worm in the column of their worms color. What color was the easiest to find? What color was the hardest to find? What type of worm has the best camouflage for this environment and why? Now, hold onto the worms that were found, do not place back in the playing area.
6. Have the teams line up again and repeat the game. Afterwards, record the results in the same two ways as before but in the "Round Two" section. Discuss the results.
7. If you have time, you may want to make bar graphs based on the collected data.
8. After the last group of the day, please pick up all of the worms in the playing area.

B. thicket game

One student is the seeker (predator) and closes his or her eyes while the others have 20 seconds to camouflage themselves in a designated area of woods. Those hiding (prey) must be able to see the seeker (predator) at all times. Seeker calls out as he or she spots other children until they see no one else. Once the "prey" is seen, they should come out of the woods and sit by the "predator" without saying anything or pointing out any of the other "prey." The seeker then closes their eyes again and counts to 10 while the remaining hidiers find a closer spot in which to camouflage themselves. Continue in this manner. Who got the closest without being seen?

VII. Animal needs

A. where do they live, what do they need

Every type of animal has a certain place that they live. Brainstorm examples with the class. Would you find a hummingbird living in a dark cave? (No, a bat might live there.) Do deer build nests to live in? (No they sleep on the ground)

Different types of animals may live in different areas and in different types of homes, but they all have the same needs for survival. Their needs are the same as our needs. They have specific needs in a habitat too. The big three things that animals need in a habitat are space, water, and food.

B. Oh Deer! Habitat game

During this game, students will get a chance to experience an animal's needs in their habitat. Take your class to an open area and split the group into two. Send half of the students to one side of the playing area and the other half to the other side. They should stand in a straight line facing the middle of the playing area. Now, one of the groups will become the deer and the other group will be the habitat. There are three actions:

Water – hand covering mouth

Food – both hands on stomach

Shelter – hands raised and jointed above the head to form a tent shape

The deer will try to find one of the habitat components so that they can survive. Now, each habitat player will think in their head which of the habitat components they want to act out. And each of the deer will think in their head which of the three habitat components they want.

Have everyone turn away from the middle of the playing area (so they cannot see each other). They should make the action for the habitat component that they chose. And on the count of 1, 2, 3 everyone will turn around and the deer will run across the field to tag someone with their matching habitat need.

(Remind the students that they cannot change their sign during the round.)

The deer that find someone on the habitat side that has the same symbol will survive that round (year) and will take the habitat back with them to the deer side. The deer that did not find a matching habitat will become part of the habitat for the next “year” and should stay on the habitat side of the playing field.

Record the results of deer that survived on the chart. Play another round.

After a few rounds, you may want to add in a predator (ask one of the students to be a wolf that can tag (eat) up to 5 deer in a round). Or you could secretly make it a drought year and tell the habitat players to only be shelter. Change the game to fit your group. You may use the graph/chart to aid in discussions.

C. habitat hike

Take a hike toward the sand dunes and/or swamp dock. Use the Habitat scavenger hunt cards to help students focus on looking for signs of habitat.

VIII. Conclusion

Today at the School Forest, we all learned a lot about forest creatures, both big and small. Ask the students to share what they learned during the day. Follow up with connecting activities at school.

IX. Clean-up

- Return supplies to building
- Take garbage out to dumpster
- Close windows, shut off all lights and water, lock doors, shut driveway gate
- Give the School Forest coordinator feedback on how to make this trip better in the future.

Safety

While at the School Forest, teachers should carry first aid kits. You can bring these from your school or use the ones at the School Forest. The first aid stations can be found in the Ehlert Lodge office, ELC classroom, and upstairs of the Krejcarek Building. Please report any safety issues to the School Forest Coordinator.

Students should be supervised at all times. If you decide to go off trail, go in a clear area where branches cannot swing back and hit someone. Be aware of the plants you are traveling around so as not to pass by thorn covered plants.

Optional / Rainy Day Activities

Invisible for a day: Ask the students to pretend they were so well camouflaged for one day that they can move around without being seen. Write a story about what might happen.

Migration Marathon:

For this game, most of the students will become hummingbirds from Wisconsin that are traveling south for the winter. Talk more about migration with the students before playing this game. All birds have different things that they do when the temperatures start to drop. Many birds from our area migrate south. Some birds go to the East Coast, some fly to Florida, and some fly all the way to Mexico. Hummingbirds, although very small, travel some of the furthest distances. Ruby-throated hummingbirds migrate over 2,000 miles to Mexico, Panama, and the Gulf States.

Set-up: Establish a playing field (one side of the volleyball court would work well) and set out the habitat pieces face down. Have students line up on one side of the field facing the field. Pick one student to be the Danger (a predator, storm, car) and pull them off to the side of the playing field. The students are now going to migrate across the field. As they migrate they should try to pick up as many habitat pieces as possible. While the hummingbirds are migrating the Danger student should run into the migration area and tag students (you can limit the amount of people the Danger can tag). Those students tagged by the Danger are pulled out of the game.

After all of the students have either reached the other side of the migration area or been tagged by the danger, stop and have the students count their habitat pieces. Those with ten or more pieces will survive till the next migration season; those that picked up less than ten will be pulled out of the game.

Talk with the students about the dangers of migration. The game pieces represent food, water, and shelter. If a hummingbird does not receive enough of one of these, it will die during migration. You can play more rounds of the game if you have time. Variations include: adding more danger, taking away some of the habitat pieces, making the migration area larger or smaller, or adding a new hummingbird for every two that make it across the playing field twice. You can also keep track of the amount of hummingbirds between the rounds for discussion.

Additional Information

Birds- more information from [Hands-On Nature](#) on the following pages. Labeled “Beaks, Feet, and Feathers”

Camouflage- more information from [Hands-On Nature](#) on the following pages

Tracks and Traces- more information from [Hands-On Nature](#) on the following pages

Resources

Basile, Carole G., Jennifer Gillespie-Malone, and Fred Collins. [Nature at Your Doorstep](#). Teacher Ideas Press, Englewood, Colorado. 1997.

Cornell, Joseph. [Sharing Nature With Children](#). Ananda Publications, 1979.

Lingelbach, Jenepher and Lisa Purcell. [Hands-On Nature](#). Vermont Institute of Natural Science, Woodstock, Vermont. 2000.

Name: _____



Birds at the School Forest

Description of Bird	Where did you see it?	Type of bird

HABITAT SCAVENGER HUNT

- 1 bird nest
- 2 leafy squirrel nests
- 1 underground home
- 5 acorns
- 1 berry
- 1 safe place for a rabbit
- 1 source of water

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