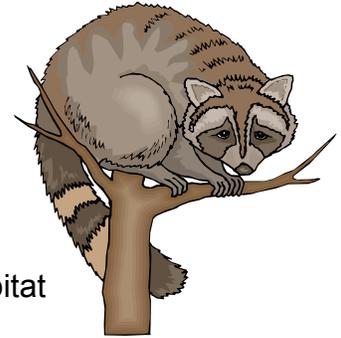


# HOW MANY RACCOONS CAN LIVE IN THIS FOREST?

## OBJECTIVES

Students will: 1) define a major component of habitat; 2) identify a limiting factor and 3) recognize the importance for suitable habitat.



## METHOD

Students become “*raccoons*” to look for one or more components of habitat during this physically involving activity.

## MATERIALS

- 6 colors of construction paper (red, yellow, green, purple, blue and brown) cut into 2” x 2” squares. You need a handful of each color.
- Paper bags, 1 per student
- 4 blindfolds

## PROCEDURE

The color of the card determines the type of food it represents:

BROWN – nuts (acorns, walnuts, hickory nuts)  
(25% of diet)

PURPLE - berries and fruit (wild strawberries and grapes)  
(25% of diet)

YELLOW – insects (grub worms, larvae, ants, termites)  
(15% of diet)

RED – meat (rodents, amphibians, reptiles, birds)  
(10% of diet)

GREEN – plants (leaves, grasses, herbs)  
(20% of diet)

BLUE – water

1. Do not tell the students what the colors of paper represent. Tell them only that the pieces of paper represent various kinds of raccoon food. Since raccoons are omnivores and like a wide assortment of food, students should gather different colored squares to represent a variety of food.

2. Each student will get a paper bag. This will represent the student’s “cache”. Have them hide it nearby.

3. In a fairly large open area (e.g. 50’ x 50’) scatter the colored pieces of paper. This is the “forest”.

4. Have the students gather in a large circle. Give them the following instructions:

*“You are now all raccoons. All raccoons are not alike, just as you and I are not exactly alike. Among you is a young male raccoon that has not yet found his own territory. Last week he met up with a larger male raccoon and before he could get away, he was hurt. He has a broken leg. (Assign one student as the injured raccoon. He must hunt while hopping on one leg. Place a blindfold on his leg as a reminder.) Another raccoon is a young female who investigated a porcupine too closely and was blinded by the quills. (Assign one student as the blind raccoon. She must hunt blindfolded). The third special raccoon is a mother raccoon with two fairly small kits. She must gather twice as much food as the other raccoons. (Assign one student as the mother raccoon, and two students as her young. The young follow by holding onto blindfolds held by mother raccoon. Young cannot gather food; only mother!!)”*

5. Students must walk into the “forest”. Raccoons do not run down their food; they gather it. When students find a colored square, they should pick it up (one at a time) and take it to their “cache” before picking up another colored square. Students may steal from each other but don’t announce this.

6. When all the colored squares have been picked up, the food gathering is over. Have students pick up their bags containing the food they gathered and return to the circle.

7. Explain what the colors represent. Each color is a kind of food. Ask each student to count each color of food he or she gathered – whether it is nuts, meat, insects, berries or plant materials. Without being obvious, try to find out the lowest and highest numbers and assign a # number for each color; remember to have higher #s for brown, purple, and green. Each raccoon should have at least 2 blue squares representing a water source.

8. Ask the blind raccoon how much food she got. Ask the injured raccoon and the mother raccoon how much they got. With 2 young, shouldn’t the mother have to get double the food? Ask each of the other students to tell how much food they found. Which raccoons survived? Was there enough to feed all the raccoons?

9. Explain that a habitat can only hold a given # of individual species; this is called its **carrying capacity**. Bad weather and other environmental conditions may result in the lack of available and shelter. Something which affects the survival of an animal or population of animals is called a **limiting factor**.

10. What do you think is the carrying capacity for this “forest”? What were the limiting factors affecting raccoon survival?