

BACKGROUND (



Many animals communicate with members of their own kind, as well as with other kinds of animals, by means of sound. Crickets chirp, frogs "ribbet," rattlesnakes rattle, crows caw, wolves howl, and whales and dolphins "sing." What do these sounds communicate? With frogs and crickets, the sounds are male mating calls intended to attract females and warn male rivals. The crow's caw is often an alarm signal triggered by the sighting of a predator. (A predator is an animal that captures and eats other animals.) The rattlesnake's rattle warns possible predators to stay away. The wolf's howl may communicate the location of the pack's

members or that a prey has been found. (A **prey** is an animal that predators eat.) Whales and dolphins have a repertoire of "songs" and "clicks" that they use to attract mates, keep family groups together, navigate, signal the location of prey or danger, and apparently to express feelings and moods.

The other half of communicating by sound involves the ability to hear and understand the sounds. A keen sense of hearing is particularly important to animals with poor vision; to animals active at night; and to animals living in dense forests, under water, or in other habitats that restrict

CHALLENGE: FIND YOUR SECRET PARTNER BEFORE A "PREDATOR" CAPTURES YOU.



MATERIALS



For each youngster:

1 mask*† (a brown paper bag large enough to fit over the head) 1 noisemaker*†

For the group:

scissors*

several index cards (for predator signs)

1 pencil

1 box for carrying the noisemakers crayons* or colored markers* (optional)

* Available from Delta Education.

† See the "Preparation" section.

PREPARATION



Group Size. This activity requires a minimum of ten players and works even better with fifteen to thirty players. We recommend one leader and an assistant for groups of twenty or more.

Time. Plan on thirty to forty minutes to play three or four rounds of the game.

Site. Choose a large open site (about 40 m x 40 m) that is free of holes, ruts, or obstacles. Grass- or asphalt-covered playfields are excellent sites. The site should be in a fairly quiet area so the youngsters can hear the noisemakers.

Noisemakers. Noisemakers must be obtained in pairs. Each pair of secret partners must have identical noisemakers that are different from those of the other pairs. If you have an odd number of "prey," you will need three of one kind of noisemaker for one group of three secret partners. Whistles, horns, rattles, bells, clickers, drums and other party favors are noisemakers that you can buy or make. You can also make shakers that sound different by putting rocks, beans, marbles, or gravel in milk cartons, beverage cans, or film canisters. Have a few extra noisemakers on hand for rule changes. (See the "Action" section.)



Predators. For groups of up to fifteen participants, write "Predator" on one index card. For sixteen to thirty participants, make two "Predator" cards. Distribute the card(s) at the same time you distribute the noisemakers.



Masks. Cut out ear holes in the creased sides of the bags. If the bags are too long, have the kids roll up the open edges.

ACTION 3



- 1. Ask the participants to imagine they are animals either with poor vision or active only at night when visibility is restricted. Ask what other senses they might rely on. Ask the group to name animals that communicate with sounds. Mention some of the examples from the "Background"
- 2. Tell the youngsters that they are going to pretend to be animals that communicate by sound. Explain that they will be wearing masks so they will have to rely on their sense of hearing.
- **3.** Display and demonstrate some of the noisemakers. Mention that most of the participants will be "prey," but one or two people will be "predators." Discuss with the group the meaning of predator and prey. (See the "Background" section.) Explain that every prey will have a secret partner with the same kind of noisemaker. The object of the game is for prey to sound their noisemakers and find their partners before being captured by a predator.
- 4. Show the group how to wear the bag masks. Mention that the bag masks will allow them to look down at their feet but

- **5.** Point out the boundaries of the game zone, and select two areas along the edge to serve as CAPTURED and SAFE areas. Go over these rules with the group:
 - Everyone may move freely, but no running is allowed!
 - No peeking!
 - If the predator tags you, take off your mask and move to the CAPTURED area. Predators must be sure the prey know that they have been tagged.
 - Prey that successfully find their secret partners should take off their masks and go to the SAFE area to watch the rest of the game.
- **6.** Have the youngsters line up and put their masks on. Ask everyone to be silent and to keep the noisemakers you give them a secret from the other players. Randomly distribute noisemakers to the youngsters. If you have more than twenty youngsters, ask them to form two lines, and have an assistant pass out the noisemakers to the other line of players. Give one or two youngsters a "Predator" card.
- 7. Have the participants, with masks in place, each place one hand on the shoulder of the person in front of him. Start a "snake walk" in which, one by one, each youngster drops out of the line as you lead the group over the entire area. Start with the first person in line.

8. When everyone is situated, shout not straight ahead. Pass out the masks. "Sound Off!" to start the first game.

- 9. Rule Changes. Play the game a number of times, trading noisemakers and picking a new predator or predators for each game. After each game, encourage the youngsters to modify the rules. Some suggestions are:
 - Each predator can capture only certain animals (making certain sounds).
 - Prev can "sound off" only when standing still.
 - Predators must make noise whenever they are moving. (Select a suitable predator noisemaker, label it "predator," and include it in the distribution of the noisemakers. Everyone must be able to recognize the predator's sound.)
 - Increase the number of predators.
 - Change the distribution of the predators and prey (i.e. the way they are scattered over the area).
 - Give prey that successfully find their partners the ability to free another prey that has been caught. This simulates reproduction for prey that find a mate.
- 10. After playing the games, listen for real animal sounds around the activity site. Discuss with the group what the animals might be communicating.



MORE SOUNDING OFF



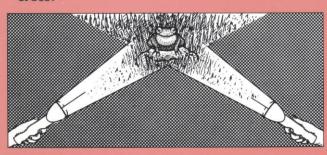
- 1. What was it like to have restricted vision and depend on your sense of hearing to find your partner?
- 2. What happened to prey who made lots of noise all the time?

- 3. Which noisemakers worked best for attracting partners?
- 4. What listening techniques did you use to find your partner? Did you use other techniques?
- 5. How did you avoid being eaten?
- 6. Was it easy or hard to walk towards your partner's sound? Why?
- 7. People are basically vision oriented. Imagine that you are going to live in a dark forest or deep in the ocean where it is difficult to see very far. What changes in your body or brain do you think would help you to survive?

BRANCHING OUT



1. Go to a forest, field, or pond on a warm evening and listen to animal sounds. Try to locate the animals that are making the sounds. If you hold a flashlight at eye level, you can often locate animals whose eyes reflect the flashlight beam. If two people with flashlights stand about three to five meters apart and point their flashlight beams in the direction a sound is coming from, they will usually find the animal near the point where the two flashlight beams cross.



- 2. Record the sounds that different animals make. Play the sounds back to the animals that made them. How do the animals react to the recorded sounds?
- 3. Try to mimic a call or animal sound to see if you get a response. For example, when you hear a croaking frog or a hooting owl, try "ribbetting" or "hooting" back.