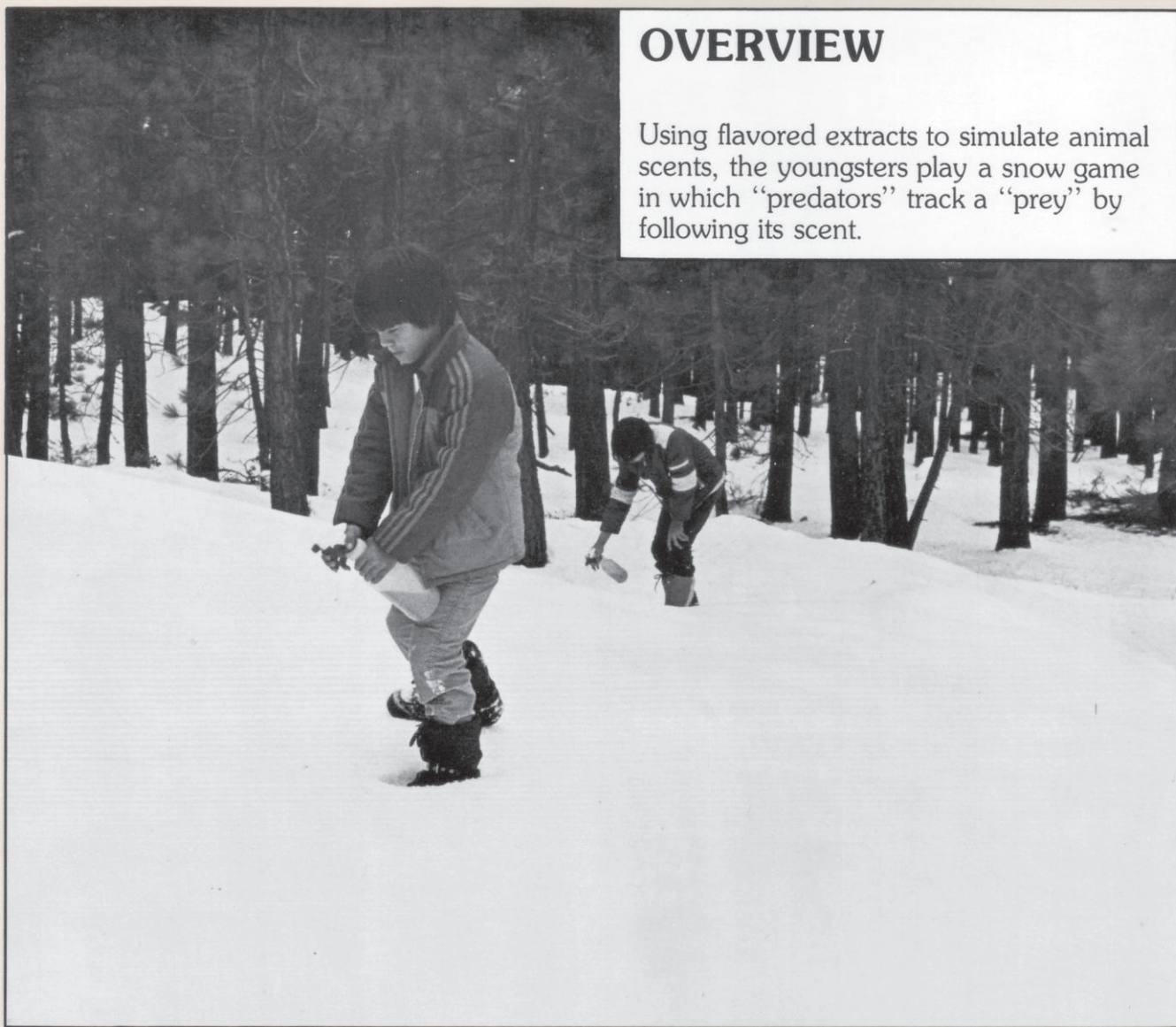


SCENT TRACKING

OVERVIEW

Using flavored extracts to simulate animal scents, the youngsters play a snow game in which "predators" track a "prey" by following its scent.



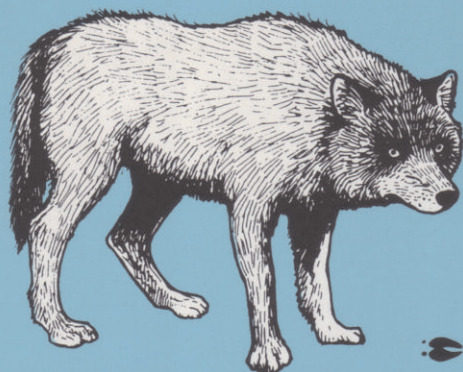
BACKGROUND



Many animals use their sense of smell to locate food, track prey, find mates, sense approaching predators, and keep track of their young. Wolves, foxes, badgers, weasels, and many other mammals are **scent trackers**; that is, they track their prey by following the prey's scent. Scent trackers have an extremely sensitive

sense of smell. Biologists have discovered that the sense of smell in wolves and other members of the dog family is at least a million times more sensitive than humans. Trained bloodhounds can even distinguish between the odors of two brothers.

Humans and other animals leave their "odor signatures" everywhere they go. An animal's odor lingers on everything that the animal touches long after the animal has gone. In addition, urine and feces are concentrated sources of animal scents that convey information about the size, age, condition, and sex of the



animal that deposits them. In addition, skunks, goats, deer, house mice, and a few other mammals have specialized scent glands, which produce substances that these animals use to mark their territories and to defend themselves.

CHALLENGE: LOCATE YOUR PREY BY FOLLOWING ITS SCENT.

MATERIALS



For each team of four:

- 1 plastic sprayer* (or "plant mister," available at hardware and grocery stores)
- 20 strips of flagging*
- 1 small paper cup*
- 1 29-ml (1 oz.) bottle of liquid flavoring extract* (See the "Preparation" section.)

For the group:

- 1 bottle of yellow food coloring*

* Available from Delta Education.

BADGER



STRIPED SKUNK

PREPARATION



Group Size. Scent Tracking works best with three or four teams of four kids. If you have more than sixteen youngsters,

divide them into two equal groups, and use a different site for each group.

Time. Plan on fifty to sixty minutes for this activity.

Site. Select an untrampled, snow-covered area about 50 meters on a side. A moderately wooded area works best. Try to locate a site that contains animal tracks and urine or feces deposits.

Clothes. Have the kids dress warmly. Avoid very cold weather.

Materials

1. Scents. Use a different liquid flavoring extract (no oils, please!) for each team. Peppermint, anise, coconut, and almond are good choices. Pour half a bottle of extract (about 15 ml) and about 150 ml of water into a plastic sprayer. Then add enough yellow food coloring to make the solution bright yellow. Set the nozzle on each plastic sprayer to produce a *stream* of liquid (rather than a mist).

2. Flagging. Cut or tear twenty strips of brightly colored cloth or thick yarn 40 to 50 cm long for each team. Use a different color for each team.

3. Cups. Fill a cup with snow for each team. Liberally spray each cup of snow with a different scent.



WOLF



MOUNTAIN LION



ACTION



MARTIN



1. Tell the kids that many animals have a much keener sense of smell than people do. As an example, you might mention that bloodhounds can track a person by following the odor that the person leaves behind on the ground and on other objects. Add that animals such as wolves, foxes, and weasels often track their prey by following the prey's scent.



2. Inform the youngsters that some of them are going to pretend to be deer and the others are going to pretend to be wolves. The "wolves," working in packs of three, are going to "sniff" the tracks of a particular "deer."

3. Tell the kids that the deer will use scented water to represent the odor they leave on anything that they touch. Hold up a plastic sprayer and squirt a couple streams of scented water onto the snow near your feet to show the youngsters how to use the sprayer.

4. Divide the group into teams of four, and select one person from each team to be a deer.

5. Mark a starting line in the snow. Tell the deer that they will each make a scent trail by squirting a scent next to their tracks every ten steps (a "step" averages about half a meter). Add that because the deer live in a fairly small area, their tracks should cross each other's several times. The deer should stick fairly close together and move in the same general direction. Each deer should end her trail in a concealed place (for example, behind a tree or snow drift). Indicate the general limits of the site.

6. Give one plastic sprayer to each of the deer, and challenge each of them to make a trail about twenty scent marks long (about 100 meters). Turn the wolves around or have them move

behind something so they can not watch the prey, and send the deer off to make their scent trails. Give the prey ten minutes to complete their trails.

7. While the deer are making tracks, give each team of wolves one of the cups of scented snow and a set of flagging. Although a keen-nosed predator can usually keep track of a particular odor when other odors are present, suggest that the "wolves" carry their prey's scent with them to use as a reference while tracking the deer.



8. Inform the wolves that each team will track a particular deer by following its scent. For example, the wolf pack with the peppermint-scented snow will track the deer that sprays peppermint. Each time a team finds its deer's scent, the team should mark the spot with a piece of flagging. (The teams can lay the flag on the mark in the snow.) If a team comes to a scent spot left by another



RED FOX



RACCOON

deer, the whole team must backtrack to the last recognizable scent spot of their deer and find the trail's continuation from there. The teams must smell the scent

SCENT TRACKING

BIO Game/Simulation
KEY Animal Behavior
Scent Tracking



spots without disturbing them; that is, the youngsters should not step on the scented snow or pick it up. Emphasize that this is not a race! The team members must walk together to prevent any scent spots from being trampled.

9. After the prey are all concealed, challenge the wolves to find their deer by following its scent. Join a team and follow the scent, too!

10. When all of the teams have located their prey, have the youngsters retrace their steps, pick up their flags, and regroup at the starting line.

FIVE "SCENTS" WORTH



JACKRABBIT

1. Were the scent trails easy or difficult to follow? Why?
2. Did any of the wolf teams get thrown off the track and have to backtrack to relocate their prey's trail? What caused the mixup? Did any of the wolf teams "catch" the wrong deer?
3. Ask the kids to compare their tracking game with their ideas on the way wolves or other predators might track their prey. What parts of the tracking game are not realistic?
4. As animals grow older, their sense of smell becomes less sensitive. What problems might this cause in a wolf? A deer?
5. How would your life be different if you had a highly developed sense of smell like that of a dog?

KEEP ON TRACKIN'!



1. Challenge the kids to search for non-human tracks and scents in the site and to follow them. Where do the tracks go? How was the animal moving? (Running? Walking? Hopping?) What animal made the tracks?
2. Move to an untrampled area and play the "track-matching" game. Ask everyone to turn their backs to you. In

the snow, make a pattern of tracks that you think will be difficult for the youngsters to match (e.g. scoot backwards while sitting, backstroke through the snow, and so on). The pattern should be about four meters long. Now ask everyone to turn around and figure out how you made the pattern. Have the kids demonstrate how they think you made the tracks. Divide the group into teams of four or five, and challenge the team members to take turns stumping their teammates with track patterns. After everyone has had a chance to make a set of tracks, gather the teams and let each team challenge the other teams to figure out their patterns. End the game by challenging the kids to "read" any animal tracks they encounter in the future.

