

# DOWN WIND

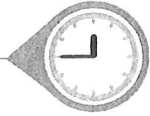
ACTIVITY  
6

## ACTIVITY SNAPSHOT

Students learn the importance of wind direction.

## ACTIVITY TIME

45 minutes



## WHAT YOU NEED

- Baby powder or cornstarch
- Strong scent, air freshener, or strong smelling food such as beef jerky, an onion or an orange
- A fan
- Extension cord
- Bubbles

## GEAR UP

It has been said that dogs can smell 100 times better than humans. In particular, bloodhounds can smell 300 times better than people. Even more astonishing, black bears can smell seven times better than bloodhounds, meaning that black bears can smell 2,100 times better than people. With odds like these, we need all the help we can get when trying to get close to wildlife. To stay out of sight of animals we're pursuing, we must stay hidden by being quiet, scent-free and camouflaged.

This activity teaches students how animals can smell them from long distances, and how the wind can help make or break your day.

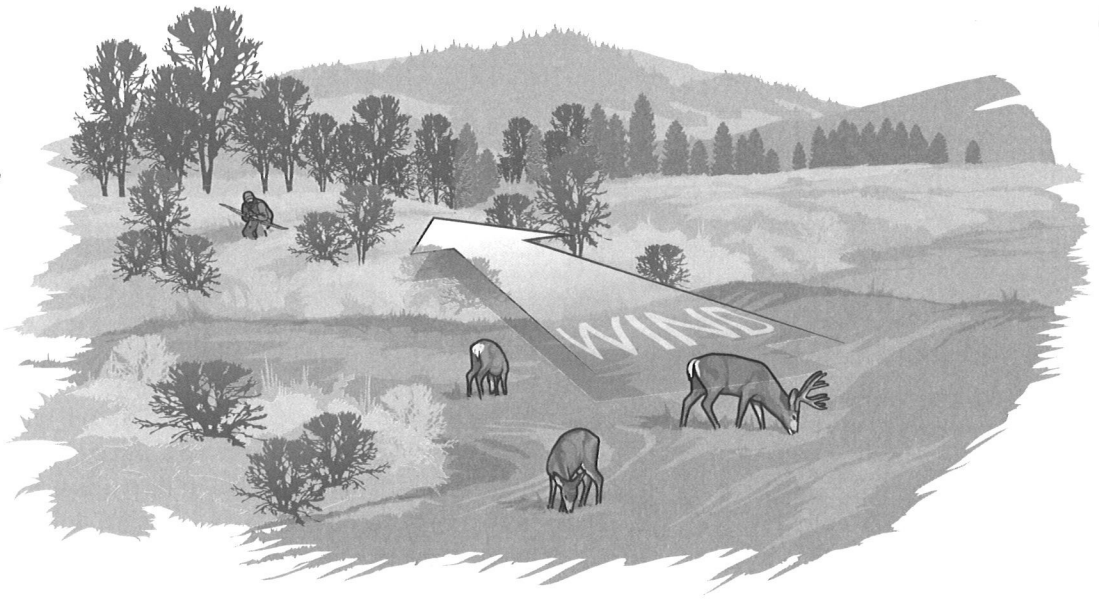
## TALKING POINTS

An animal's sense of smell is well developed. Animals use odors to detect danger and communicate information to each other. Their odor-detecting defense allows prey animals to smell predators and potential dangers in time to escape. Likewise, many predators use their nose to locate prey animals to hunt and eat.

Wind direction plays a major role in animals taking advantage of their sense of smell. An animal can smell something from a distance when the odor is carried to it by wind. Wind carries odors over a broad area and, in optimal wind conditions, some animals can smell odors more than three miles away.

Hunters always strive to be "downwind" of animals when on stand, stalking or still-hunting. The word "downwind" means the wind is carrying scents "down" to you from the animal. As a result, the same wind carries your odor away from the animal if you're downwind from it. In contrast, if the hunter is "upwind" of the animal, the hunter's scent is carried "down" to the animal, which alerts it to danger and makes it flee or hide. To sum up, if you are upwind from an animal, it will smell you. If you are downwind from an animal, it cannot smell you. Whenever possible, hunters position themselves to face or stalk into the wind, which keeps them downwind of the animal they're hunting.

*Hunter that is downwind.  
Notice the hunters scent  
is being carried away from  
the animals.*



*Hunter that is upwind.  
Notice the hunters scent  
being carried to the animals  
and they are alerted to the  
hunter's presence.*



Illustrations by Ryan Kirby

When trying to get close to wildlife by sitting in a blind or tree stand, having wind is better than no wind. If the air just sits around you, your odor will just sit there too. That allows animals to smell you as they approach your area.

## GETTING READY

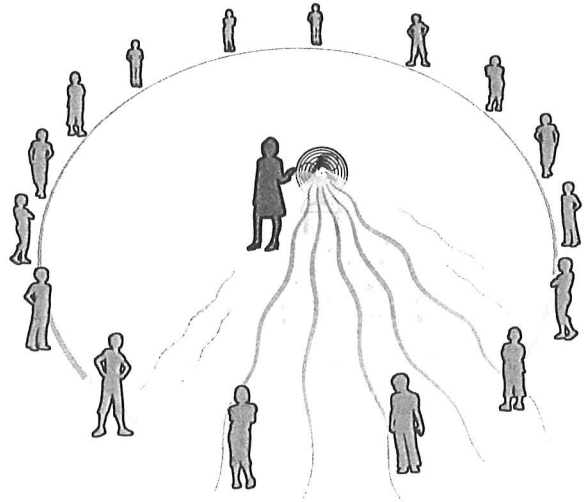
Find an open area outside where you can set up a fan.

***Educator's Note: If you have a good, steady wind, you do not need a fan. Just place students so the wind is blowing in the direction you need it.***

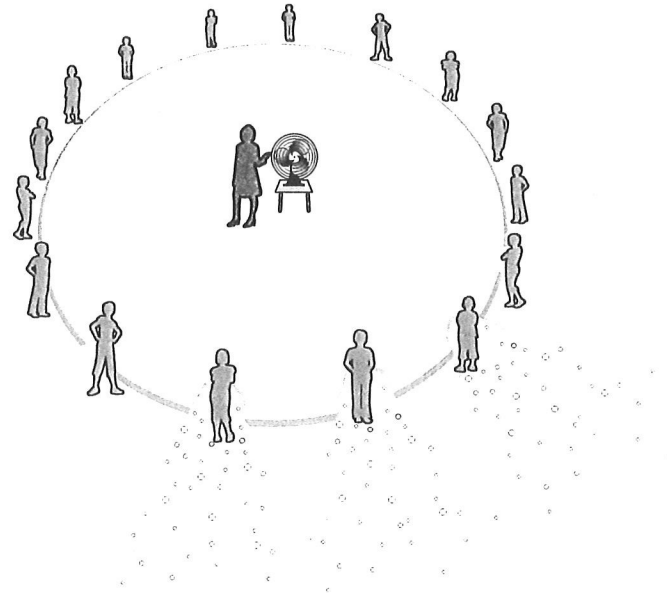
## LET'S GET STARTED

- 1 Discuss and define the difference between downwind and upwind, and the importance of wind direction when trying to get close to wildlife.
- 2 Take the class outside.
- 3 Set up the fan next to you, facing in any direction.
- 4 Have students get in a circle around you, about 15 to 20 feet (5 to 7 yards) away.
- 5 Have students close their eyes. Spray or place the food item into the fan. Have students raise their hands when they smell it.
- 6 Have students open their eyes. Did all students smell the odor? Which students were downwind? Did they smell it? Which students were upwind? Did they smell it?
- 7 Next, coat students' hands with cornstarch or baby powder.
- 8 Turn the fan on and face it so it's blowing toward the students. Spread the students apart and have them clap their hands.
- 9 Discuss what happened to the powder:
  - Did the powder blow in the same direction from everyone's hands?
  - What does that tell you about wind direction?
- 10 Now, line students up single-file, spacing them out so the line goes at least 30 yards (90 feet).
- 11 Mark the line at 5, 10, 15, 20, 25, and 30 yards.
- 12 Set up the fan next to you but don't turn it on yet. Stand about 10 feet away from the front of the line.
- 13 At the front of the line spray or hold the food up. Have the students who can smell the odor raise their hands. Mark the distance the odor traveled.

*Students smelling scent.*



*Students watching powder disperse.*



Illustrations by Ryan Kirby

***Educator's Note: Allow 1 to 2 minutes between sprayings to allow the scents to dissipate.***

- 14 Turn the fan on and face it away from the students. Spray or place the food item into the fan and have the students who can smell it raise their hands. Mark the distance the odor traveled.
- 15 Turn the fan so it faces the line of students. Spray or place the food item into the fan again and have the students who can smell it raise their hands. Mark the distance the odor traveled. Compare the distance the odor traveled in all three situations (no wind, downwind, and upwind).
- 16 Now do the same thing with bubbles. Blow the bubbles into the fan facing away from students, facing students and with no fan at all. Now the students can see where the scent is going.
- 17 Also blow bubbles in the direction of a large vehicle or small building. Notice how the air goes around the obstructions. A scent will also go around objects.
- 18 Coat student's hands with cornstarch or baby powder again.
- 19 Spread the students apart and have them clap their hands without a fan. (Do this indoors if it's windy outside).
- 20 Discuss what happened to the powder:
  - Did the powder blow in the same direction from everyone's hands?
  - What does that tell you about the wind direction?

## ENRICHMENTS

- 1 Divide the students into teams of three or four. Have each team take a different scent and determine:
  - What direction the wind is blowing.
  - How far the scent traveled.
  - What would be the best direction to approach an animal from that day?
- 2 Set the fan to different settings and space the students out farther. Does the scent travel farther or faster based on wind strength?

## DISCUSSION QUESTIONS

- 1 How far could you smell the scent with no fan (wind)?
- 2 How far could you smell the scent with the fan blowing toward the students?
- 3 How many students could smell the scent with the fan blowing away from them?
- 4 How far could you smell the scent with the fan blowing away from students?
- 5 Did the fan or wind direction make a difference in the number of students who could smell the scent? Why or why not?
- 6 Why is it important to know which direction the wind is blowing when stalking an animal? *Answer: You want to remain downwind at all times so the animal does not pick up your scent.*
- 7 Would wind strength make a difference in how far scent travels? *Answer: Yes, the stronger the wind, the faster and farther a scent will travel. However, strong winds also dissipate scent faster, and make it more difficult for predators and prey to pinpoint its source.*