

**LEVEL:** K-7

**SUBJECTS:** Science, Social Studies, Language Arts.

**PROCESS:** Through experimenting with physical distance and levels of comfort in humans, students will estimate appropriate distances between humans and wildlife under various conditions, hypothesize about indicators of animal discomfort, and summarize reasons to avoid animal discomfort through crowding.

**OBJECTIVES:** The student will:

1. Describe possible negative consequences for people and wildlife under conditions of crowding.
2. Identify ways people can behave to help reduce negative consequences of crowding for wildlife.

**TIMEFRAME:** Ten 30-minute classes, depending on age of students.

**SKILLS:** Hypothesizing, inferring.

**MATERIALS:** None needed.

**VOCABULARY:** Behavior, crowding, disturbance, safety.



## THREE'S A CROWD

**OVERVIEW:** Sometimes wildlife seems to want to say, "Don't get too close!" From a tree branch a bird watches a person approaching; when he or she gets too close, the bird takes flight.

Animals are often threatened when crowded by humans, even though the humans may mean no harm and merely want to observe the animal. Animals may display their discomfort by fleeing, grinding teeth, coiling, hissing, stomping feet, snarling, coughing, or woofing. Flight is the usual way of showing stress. Noises may come when an animal is ready or threatening to attack.

Wildlife photographers have learned that they have probably gotten too close when the wildlife they are photographing begin to act strangely. Animals may run away if humans are outside a certain distance. At closer range, they may charge or respond in other aggressive ways to the threat

of human presence.

One way of understanding how a wild animal acts when crowded is to recognize that many animals have certain distances they keep even from their own kind. Wolves may demand large areas of range which no other wolf outside of their own pack (family) may enter. Studies show that certain kinds of finches always leave a certain distance between themselves when they perch on a telephone wire or fence line.

When crowding occurs, many animals react with bizarre, aggressive, disordered behavior, and may develop skin diseases like mange. They may adjust to the crowded situation, over time, by ceasing reproduction.

In the United States, great blue heron rookeries have been disturbed by the mere presence of people. Rookeries are the birds' breeding grounds. Herons live

most of the year as lone individuals; when they come together to breed - to go through courtship and nesting - they experience stress, if disturbed by humans. When stressed they may stop breeding, lay few eggs, or abandon the rookery, leaving eggs or young birds to perish. At a heron rookery in Colorado, wildlife managers have established a 1000-foot limit; no human disturbance is allowed close to the rookery. They are not sure this limit will save the rookery from development pressures, but they know any closer range would certainly disrupt the rookery.

The major purpose of this activity is for students to recognize the possible negative consequences for people and wildlife as a result of conditions of crowding.

#### **PROCEDURE:**

1. Introduce the concept of discomfort from crowding by asking one student to stand in front of the class. Approach the student slowly, asking the student to hold up a hand to show when your closeness makes him or her begin to feel uncomfortable. Ask:

**-Why does it feel uncomfortable?**

**-If I were to step in closer, what would you feel like doing?**

Have students experience the feelings themselves by lining up in two rows facing each other. Each student in one row slowly approaches the person across from him or her. The stationary person gives a signal to stop when it gets too close. Have them hold their positions and really "feel" the closeness. Look up and down the row. Why are some spaces between people bigger than others? Repeat with the opposite row doing the approaching. Ask:

**-Do you allow strangers to approach you as closely as you do friends or family? Why?**

**-How do you feel in the middle of strangers on a crowded bus or elevator?**

**-How might your body react in some kinds of crowded conditions?** (*Nervousness, sweaty palms, hard to breath, don't look at*

*people, etc.*)

2. Ask:

**-Why might animals in the wild also be uncomfortable when approached by strangers?** (*Fear of being attached, need to protect young, etc.*)

**-What other things might increase or decrease fear?** (*Ability to fly away, climb quickly, run fast, swim fast, animal size, whether the animal is alone or with a group, is on a nest, or has young, etc.*)

3. Have the students make a list of animals they are likely to encounter in the environment. Have them estimate what distance should be maintained from each animal species - both for personal safety and for the comfort and safety of the animal. Emphasize that these are just estimates. It's better to stay farther away than you think is necessary than to get too close.

4. Have students hypothesize about animal behaviors that might indicate discomfort such as foot stomping, teeth grinding, raising up on hind feet, looking around nervously, and eventually flight. OPTION: Students mime or role play such situations. Classmates guess the animal they are, and in what situation.

5. Discuss ways in which wildlife harassment might occur unintentionally such as flying too close in small airplanes, getting too close to photograph, calling or heckling for animals to react (especially at zoos), hiking near a nesting site, and using loud vehicles near baby animals or in places where animals are unaccustomed to seeing them. Explain that there are certain times of the year when some animals may be more sensitive to being disturbed. Mating season or during severe climatic conditions such as heavy winters or drought are examples. How can communities minimize disturbances? What can individual people do? Summarize reasons it is important to minimize such disturbance from people for wildlife.

#### **ASSESSMENT:**

Ask:

1. What behaviors might show that a person speaking in front of a group is nervous?

2. How might a mother dog let you know you are getting too close to her and her pups?

3. Rank order the following, from animals you could get closest to without harming to those you should stay the furthest away from: a heron rookery during breeding season, young raccoons in a forest, a large garter snake in the grass of your yard, honey bees around their hives, frogs in a freshwater pond in the summer.

4. Describe negative results of crowding for humans. Describe negative results of crowding for animals.

### EXTENSIONS:

1. Draw life-size outlines of some animals and mount them on an outside wall of the school building. Break into small groups; have each group establish a distance from each species that the group feels would be far enough for the animal not to be threatened by the pressure of a person. Using measuring tapes, each group measures and records the established "comfort zone" for each species under different conditions - and then presents their suggested distances for the animal comfort zones. Contact a wildlife resource person to check the accuracy of these distances. Is there a general rule about the relationship between the size of the comfort zone to things such as size of the animal, presence of young, ability to flee, single or group of animals, etc.?

2. What are reasons it is important to help domesticated animals like pets, dairy cows, etc. feel more comfortable in "close" conditions? How do humans "tame" animals? Why is it usually not a good idea to try to tame wild animals?

3. What happens to people when they feel too crowded? How do we show respect for someone when they say "Give me some space!"

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