

Flight distance and personal space

Background information (less than 150 words)

Animals generally have a personal space around themselves which they prefer that conspecifics (animals of the same species) and other animals (e.g. humans) do not enter. The space, often called a flight distance, will vary with a number of things including the species in question, familiarity with the animal(s) entering the space, the particular fear level of the focus animal, among many other factors. Typically, an animal's initial response is to move away from the approaching animal, i.e., to maintain a minimum flight distance. The concept applies to almost all animals, as well as insects, though is particularly well studied in livestock species like cattle.

A number of questions can be developed with this phenomenon, though this experiment will focus on comparing cattle in groups versus individuals.

Possible background reading for students (2-3 Links to relevant websites, articles, or sources)

- [http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/agdex8274](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/agdex8274)
- <http://www.grandin.com/behaviour/principles/flight.zone.html>

Needed materials

- Cows are typically a common animal to use, though any animal (e.g. deer) that is generally fearful of humans will be appropriate
- A large, open area, ideally that allows for markings to indicate distances for recording observation of distances

Procedure

1. Simple, basic steps that are numbered so you can make references to them, e.g., step 4 is optional.
2. Provide any warnings or key steps

How to interpret results

Animals in these situations will normally move away from the observer and maintain a minimal distance between themselves and the observer where the distance is in proportion to the fear the animal is experiencing. It should be expected that animals which are more familiar with the observer or people in general would be expected to have a smaller flight distance.

Depending on how the exercise is organized, animals in groups may maintain a smaller flight distance than those that are isolated, a result that could suggest animals in groups have more confidence against potential threats.