



TEACHER INFO

ANIMAL GROUP BEHAVIOR GRADES 3-5

COMMON MISCONCEPTIONS

- **Animals do not work together. They always work by themselves and are in competition with other animals.**
Animals often work together to obtain food, defend themselves, and cope with changes in order to survive.

ANIMAL BEHAVIOR

Animal behavior can be defined as an animal's reaction to other animals of the same type, other types of animals or to its environment. This could range from a dog barking when the doorbell rings to a young girl making a sandwich because she is hungry to a bear hibernating through the winter. In discussing group behavior in animals groups could range in size from just two individuals, to hundreds, thousands or even millions.

NGSS DIMENSIONS

In NGSS Disciplinary Core Idea progression for LS1.D students explore animal behavior in the context of response to stimuli. In DCI LS2.D progression students look at different ways that animals interact in groups for the purpose of eating, protection or coping with environmental changes. This particular DCI comes up in upper elementary, and then not again until high school. What the students learn at the elementary level sets them up to understand group behavior in the context of evolution (from the High School level DCI progression):

Group behavior has evolved because membership can increase the chances of survival for individuals and their genetic relatives. (NGSS Appendix E Progressions within the NGSS, p.5, NGSS Lead States. 2013. Next Generation Science Standards: For States, By States. Washington, DC: The National Academies Press.)

Because so many animals utilize group behavior in many different ways, the goals of this lesson and the dimensions it covers are in observing various examples of animal group behavior, identifying causes and effect related to group behavior, and identifying and using observations as evidence to support arguments related to group behavior.



GROUP FEEDING BEHAVIOR

Acquiring food, which is critical to survival, is something that many types of animals work together to accomplish. In the video examples of group feeding behavior include insects, such as ants and bees, which work as colonies to collect food to feed their young which are found in most places and are therefore familiar to students. Other examples given (such as lions hunting in groups called prides, or humpback whales using “bubble net” techniques to catch fish) may be more foreign to students depending upon where they live. When discussing animal group feeding behavior, encourage students to come up with both local examples and those that students are less likely to have seen.

GROUP DEFENSIVE BEHAVIOR

“Safety in numbers” is a common phrase that students have probably heard. Groups of animals are more intimidating to predators and multiple eyes and ears mean that danger is more likely to be detected before it becomes a threat, and the response of one or more animals in a group can alert others. In addition to “safety in numbers” defensive behavior such as the meerkat’s sentry allows other members of the group to go about their business as one or more stands guard.

GROUP RESPONSE TO ENVIRONMENTAL CHANGE

Migrations are a great example of group response to environmental change. As seasons change, animals must move in search of food and water. Being part of a group can ensure that animals find food and also provides them safety as they travel.

OTHER EXAMPLES OF GROUP BEHAVIOR

Another example of group behavior that is mentioned in the video but that is not explicit in the DCI is the importance of animal groups for finding a mate (more potential mates leads to more potential to mate—and diversify the gene pool, a more advanced concept).

